NICE National Institute for Health and Care Excellence

NICE Pathways

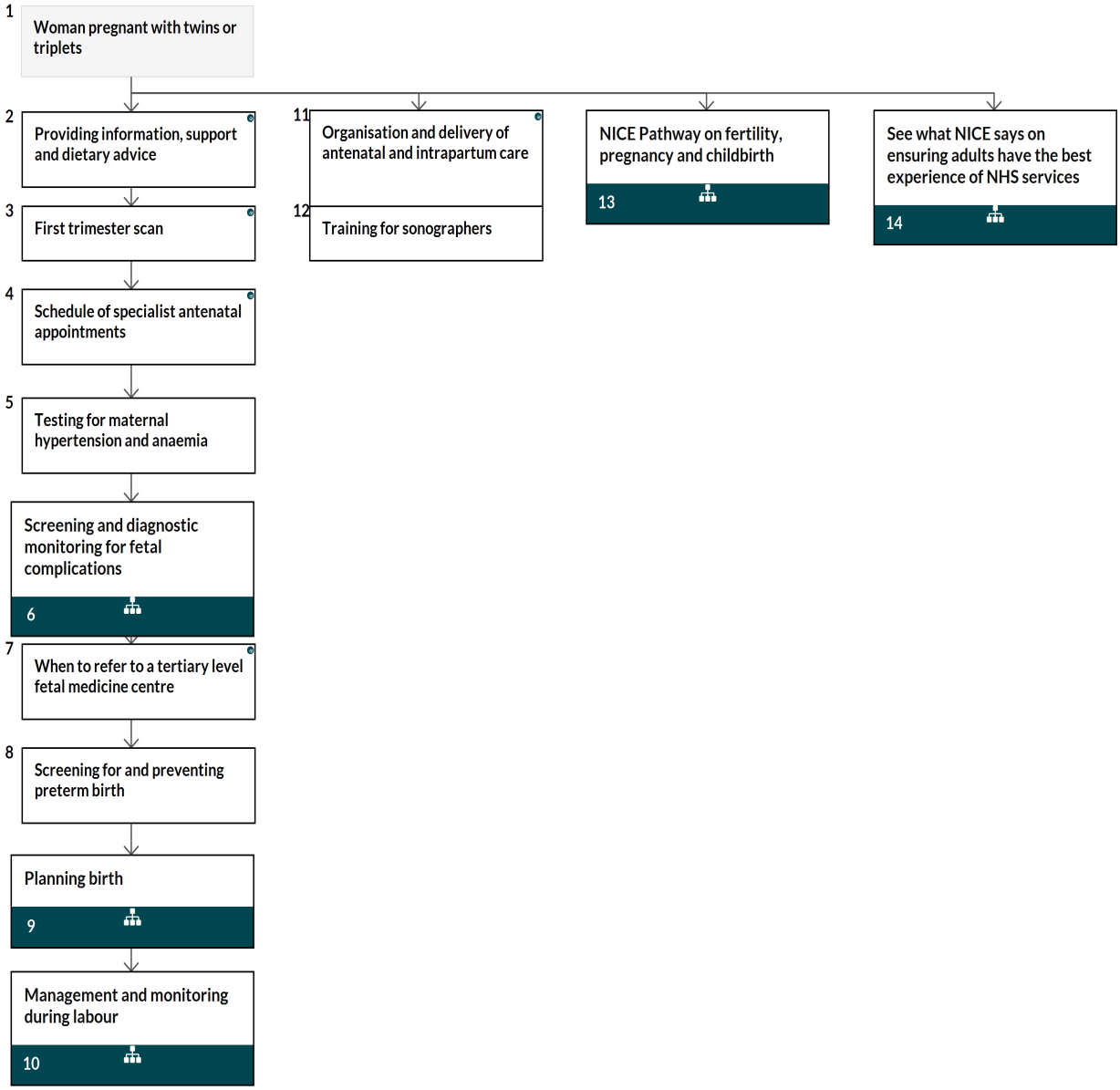
Twin and triplet pregnancy overview

NICE Pathways bring together everything NICE says on a topic in an interactive flowchart. NICE Pathways are interactive and designed to be used online.

They are updated regularly as new NICE guidance is published. To view the latest version of this NICE Pathway see:

http://pathways.nice.org.uk/pathways/twin-and-triplet-pregnancy
NICE Pathway last updated: 17 December 2019

This document contains a single flowchart and uses numbering to link the boxes to the associated recommendations.



1 Woman pregnant with twins or triplets

No additional information

2 Providing information, support and dietary advice

The core team should offer information and emotional support specific to twin and triplet pregnancies at their first contact with the woman and provide ongoing opportunities for further discussion and advice including:

- antenatal and postnatal mental health and wellbeing (see the NICE Pathway on antenatal and postnatal mental health).
- antenatal nutrition (see below)
- the risks, symptoms and signs of preterm labour and the potential need for corticosteroids for fetal lung maturation (see screening for and preventing preterm birth [See page 9])
- likely timing of birth and possible modes of birth (see planning birth)
- breastfeeding
- parenting.

For information about the core team, see organisation and delivery of antenatal and intrapartum care [See page 11].

Explain sensitively the aims and possible outcomes of all screening and diagnostic tests to women with a twin or triplet pregnancy to minimise their anxiety.

NICE has written information for the public on twin and triplet pregnancy.

Nutritional supplements, diet and lifestyle advice

Give women with a twin or triplet pregnancy the same advice about diet, lifestyle and nutritional supplements as in routine antenatal care (see lifestyle considerations in the NICE Pathway on antenatal care for uncomplicated pregnancies).

See the NICE Pathways on maternal and child nutrition and diabetes in pregnancy.

Quality standards

The following quality statement is relevant to this part of the interactive flowchart.

7. Advice and preparation for preterm birth

3 First trimester scan

Offer women with a twin or triplet pregnancy a first trimester ultrasound scan to estimate gestational age and determine chorionicity and amnionicity (ideally, these should all be performed at the same scan; see below). For recommendations on chromosomal screening, see screening for chromosomal conditions.

See also when to refer to a tertiary level fetal medicine centre [See page 7].

Estimating gestational age

Estimate gestational age from the largest baby in a twin or triplet pregnancy to avoid the risk of estimating it from a baby with early growth pathology.

Determining chorionicity and amnionicity

Determine chorionicity and amnionicity at the time of detecting a twin or triplet pregnancy by ultrasound using:

- the number of placental masses
- the presence of amniotic membrane(s) and membrane thickness
- the lambda or T-sign.

Assign nomenclature to babies (for example, upper and lower, or left and right) in a twin or triplet pregnancy, and document this clearly in the woman's notes to ensure consistency throughout pregnancy.

If a woman with a twin or triplet pregnancy presents after 14^{+0} weeks, determine chorionicity and amnionicity at the earliest opportunity by ultrasound using all of the following:

- the number of placental masses
- the presence of amniotic membrane(s) and membrane thickness
- the lambda or T-sign
- discordant fetal sex.

Do not use 3-dimensional (3-D) ultrasound scans to determine chorionicity and amnionicity.

See also training for sonographers [See page 12].

Problems determining chorionicity

If transabdominal ultrasound scan views are poor because of a retroverted uterus or a high BMI, use a transvaginal ultrasound scan to determine chorionicity and amnionicity.

If it is not possible to determine chorionicity or amnionicity by ultrasound at the time of detecting the twin or triplet pregnancy, seek a second opinion from a senior sonographer or refer the woman to a healthcare professional who is competent in determining chorionicity and amnionicity by ultrasound scan as soon as possible.

If it is difficult to determine chorionicity, even after referral (for example, because the woman has booked late in pregnancy), manage the pregnancy as a monochorionic pregnancy until proved otherwise.

Quality standards

The following quality statements are relevant to this part of the interactive flowchart.

1. Determining chorionicity and amnionicity

2. Labelling the fetuses

4 Schedule of specialist antenatal appointments

The schedule of specialist appointments is also shown as part of a multiple pregnancy antenatal care resource produced by Twins Trust and endorsed by NICE.

Dichorionic diamniotic twin pregnancy

Offer women with an uncomplicated dichorionic diamniotic twin pregnancy at least 8 antenatal appointments with a healthcare professional from the core team. At least 2 of these appointments should be with the specialist obstetrician.

- Combine appointments with scans when crown–rump length measures from 45.0 mm to 84.0 mm (at approximately 11^{+2} weeks to 14^{+1} weeks) and then at estimated gestations of 20, 24, 28, 32 and 36 weeks.
- Offer additional appointments without scans at 16 and 34 weeks.

Monochorionic diamniotic twin pregnancy

Offer women with an uncomplicated monochorionic diamniotic twin pregnancy at least 11 antenatal appointments with a healthcare professional from the core team. At least 2 of these appointments should be with the specialist obstetrician.

- Combine appointments with scans when crown–rump length measures from 45.0 mm to 84.0 mm (at approximately 11^{+2} weeks to 14^{+1} weeks) and then at estimated gestations of 16, 18, 20, 22, 24, 26, 28, 30, 32 and 34 weeks.

Triamniotic triplet pregnancy (trichorionic, dichorionic or monochorionic)

Offer women with an uncomplicated trichorionic triamniotic triplet pregnancy at least 9 antenatal appointments with a healthcare professional from the core team. At least 2 of these appointments should be with the specialist obstetrician.

- Combine appointments with scans when crown–rump length measures from 45.0 mm to 84.0 mm (at approximately 11^{+2} weeks to 14^{+1} weeks) and then at estimated gestations of 20, 24, 26, 28, 30, 32 and 34 weeks.
- Offer an additional appointment without a scan at 16 weeks.

Offer women with a dichorionic triamniotic triplet pregnancy or monochorionic triamniotic triplet pregnancy at least 11 antenatal appointments with a healthcare professional from the core team. At least 5 of these appointments should be with the specialist obstetrician.

- Combine appointments with scans when crown–rump length measures from 45.0 mm to 84.0 mm (at approximately 11^{+2} weeks to 14^{+1} weeks) and then at estimated gestations of 16, 18, 20, 22, 24, 26, 28, 30, 32 and 34 weeks.

Twin and triplet pregnancies with a shared amnion

Offer women with a twin or triplet pregnancy involving a shared amnion individualised care from a consultant in a tertiary level fetal medicine centre (see when to refer to a tertiary level fetal medicine centre [See page 7]).

Quality standards

The following quality statement is relevant to this part of the interactive flowchart.

4. Care planning

5 Testing for maternal hypertension and anaemia

Hypertension

Measure blood pressure and test urine for proteinuria to screen for hypertensive disorders at each antenatal appointment in a twin and triplet pregnancy in line with the recommendations on pre-eclampsia in the NICE Pathway on antenatal care for uncomplicated pregnancies.

Advise women with a twin or triplet pregnancy to take low-dose aspirin[1] daily from 12 weeks until the birth of the babies if they have 2 or more of the risk factors specified in reducing the risk of pre-eclampsia in the NICE Pathway on hypertension in pregnancy.

Anaemia

Perform a full blood count at 20 to 24 weeks to identify women with a twin or triplet pregnancy who need early supplementation with iron or folic acid (this is in addition to the test for anaemia at the routine booking appointment recommended in booking appointment in the NICE Pathway on antenatal care for uncomplicated pregnancies. Repeat at 28 weeks as in routine antenatal care.

Be aware of the higher incidence of anaemia in women with a twin or triplet pregnancy compared with women with a singleton pregnancy.

6 Screening and diagnostic monitoring for fetal complications

See Twin and triplet pregnancy / Screening and diagnostic monitoring for fetal complications in a twin or triplet pregnancy

7 When to refer to a tertiary level fetal medicine centre

Seek a consultant opinion from a tertiary level fetal medicine centre for:

- pregnancies with a shared amnion:
  - monochorionic monoamniotic twins
  - dichorionic diamniotic triplets
  - monochorionic diamniotic triplets

[1] At the time of publication (September 2019), aspirin did not have a UK marketing authorisation for this indication. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the General Medical Council's Prescribing guidance: prescribing unlicensed medicines for further information.

- monochorionic monoamniotic triplets

- pregnancies complicated by any of the following:
  - fetal weight discordance (of 25% or more) and an EFW of any of the babies below the 10th centile for gestational age (see diagnostic monitoring for fetal growth restriction and complications of monochorionicity)
  - fetal anomaly (structural or chromosomal) (see screening and diagnostic monitoring for fetal complications)
  - discordant fetal death
  - feto-fetal transfusion syndrome (see feto-fetal transfusion syndrome)
  - TRAP
  - conjoined twins or triplets
  - suspected TAPS (see twin anaemia polycythaemia sequence).

Quality standards

The following quality statement is relevant to this part of the interactive flowchart.

6. Involving a consultant from a tertiary level fetal medicine centre

8 Screening for and preventing preterm birth

Screening for preterm birth

Explain to women and their family members or carers (as appropriate) that:

- they have a higher risk of spontaneous preterm birth (see discussing timing of birth) than women with a singleton pregnancy **and**
- this risk is further increased if they have other risk factors, such as a spontaneous preterm birth in a previous pregnancy.

Do not use fetal fibronectin testing alone to predict the risk of spontaneous preterm birth in twin and triplet pregnancy.

Do not use home uterine activity monitoring to predict the risk of spontaneous preterm birth in twin and triplet pregnancy.

See the NICE guideline to find out why we made these recommendations and how they might affect practice.

Preventing preterm birth

We did not make any recommendations on vaginal progesterone for preventing preterm birth in twin pregnancies because of emerging evidence in this area (see rationale and impact in the NICE guideline). NICE will carry out an update based on the new evidence when it becomes available.

Do not offer intramuscular progesterone to prevent spontaneous preterm birth in women with a twin or triplet pregnancy.

Do not offer the following interventions (alone or in combination) routinely to prevent spontaneous preterm birth in women with a twin or triplet pregnancy:

- arabin pessary
- bed rest
- cervical cerclage
- oral tocolytics.

See the NICE guideline to find out why we made these recommendations and how they might affect practice.

Use of corticosteroids

Inform women with a twin or triplet pregnancy of their increased risk of preterm birth (see above) and about the benefits of targeted corticosteroids.

Do not use single or multiple untargeted (routine) courses of corticosteroids in twin or triplet pregnancy. Inform women that there is no benefit in using untargeted administration of corticosteroids.

9 Planning birth

See Twin and triplet pregnancy / Planning birth in a twin or triplet pregnancy

10 Management and monitoring during labour

See Twin and triplet pregnancy / Management and monitoring during labour in a twin or triplet pregnancy

11 Organisation and delivery of antenatal and intrapartum care

Networks should agree care pathways for managing all twin and triplet pregnancies to ensure that each woman has a care plan in place that is appropriate for the chorionicity and amnionicity of her pregnancy.

Antenatal care

Antenatal clinical care for women with a twin or triplet pregnancy should be provided by a nominated multidisciplinary team consisting of:

- a core team of named specialist obstetricians, specialist midwives and sonographers, all of whom have experience and knowledge of managing twin and triplet pregnancies
- an enhanced team for referrals, which should include:
  - a perinatal mental health professional
  - a women's health physiotherapist
  - an infant feeding specialist
  - a dietitian.

Members of the enhanced team should have experience and knowledge relevant to twin and triplet pregnancies.

Do not routinely refer all women with a twin or triplet pregnancy to the enhanced team, but base the decision to refer on each woman's needs.

Coordinate clinical care for women with a twin or triplet pregnancy to:

- minimise the number of hospital visits
- provide care as close to the woman's home as possible
- provide continuity of care within and between hospitals and the community.

Intrapartum care

Intrapartum care for women with a twin or triplet pregnancy should be provided by a multidisciplinary team of obstetricians and midwives who have experience and knowledge of managing twin and triplet pregnancies in the intrapartum period.

See the NICE guideline to find out why we made this recommendation and how it might affect practice.

Quality standards

The following quality statements are relevant to this part of the interactive flowchart.

3. Composition of the multidisciplinary core team

4. Care planning

12 Training for sonographers

Provide regular training so that sonographers can identify the lambda or T-sign accurately and confidently. Less experienced sonographers should have support from senior colleagues.

Training should cover ultrasound scan measurements needed for women who book after 14^{+0} weeks (see first trimester scan [See page 4]) and should emphasise that the risks associated with twin and triplet pregnancy are determined by chorionicity and not zygosity.

Conduct regular clinical audits to evaluate the accuracy of determining chorionicity and amnionicity.

13 NICE Pathway on fertility, pregnancy and childbirth

See Fertility, pregnancy and childbirth

14 See what NICE says on ensuring adults have the best experience of NHS services

See Patient experience in adult NHS services

Glossary

dichorionic diamniotic twin pregnancy

(each baby has a separate placenta and amniotic sac)

monochorionic diamniotic twins

(both babies share a placenta but have separate amniotic sacs)

monochorionic diamniotic twin pregnancy

(both babies share a placenta but have separate amniotic sacs)

monochorionic monoamniotic twins

(both babies share a placenta and amniotic sac)

monochorionic monoamniotic twin pregnancy

(both babies share a placenta and amniotic sac)

trichorionic triamniotic triplet pregnancy

(each baby has a separate placenta and amniotic sac)

dichorionic triamniotic triplet pregnancy

(1 baby has a separate placenta and 2 of the babies share a placenta; all 3 babies have separate amniotic sacs)

dichorionic diamniotic triplets

(1 baby has a separate placenta and amniotic sac and 2 of the babies share a placenta and amniotic sac)

monochorionic triamniotic triplet pregnancy

(all 3 babies share 1 placenta but each has its own amniotic sac)

monochorionic diamniotic triplet pregnancy

(all 3 babies share 1 placenta. 1 baby has a separate amniotic sac and 2 babies share 1 sac)

monochorionic diamniotic triplets

(all 3 babies share 1 placenta. 1 baby has a separate amniotic sac and 2 babies share 1 sac)

monochorionic monoamniotic triplets

(all 3 babies share a placenta and amniotic sac)

monochorionic twin or triplet pregnancy

(a pregnancy in which any of the babies share a placenta and a chorionic (outer) membrane; this includes monochorionic twins and dichorionic and monochorionic triplets)

amnion

(the inner membrane that surrounds the baby – pregnancies with one amnion [so that all babies share an amniotic sac] are monoamniotic; pregnancies with two amnions are diamniotic; and pregnancies with three amnions are triamniotic)

active management of the third stage

(in a vaginal birth, active management consists of 10 IU of oxytocin by intramuscular injection immediately after the birth of the last baby and before the cord is clamped and cut. In a caesarean section, it consists of 5 IU of oxytocin by intravenous injection immediately after the birth of the last baby and before the cord is clamped and cut)

amnionicity

(the number of amnions [inner membranes] that surround babies in a multiple pregnancy; pregnancies with 1 amnion [so that all babies share an amniotic sac] are described as monoamniotic; pregnancies with 2 amnions are diamniotic; and pregnancies with 3 amnions are triamniotic)

chorionicity

(the number of chorionic [outer] membranes that surround babies in a multiple pregnancy. If

there is only 1 membrane, the pregnancy is described as monochorionic; if there are 2, the pregnancy is dichorionic; and if there are 3, the pregnancy is trichorionic; monochorionic twin pregnancies and monochorionic or dichorionic triplet pregnancies carry higher risks because babies share a placenta)

feto-fetal transfusion syndrome

(occurs when blood moves from one baby to another: the baby that loses the blood is called the donor and the baby receiving the blood is called the recipient; feto-fetal transfusion syndrome is a complication of monochorionic multiple pregnancies arising from shared placental circulation; it is also referred to as twin-to-twin transfusion syndrome in twin pregnancies)

specialist obstetrician

(an obstetrician with a special interest, experience and knowledge of managing multiple pregnancy, and who works regularly with women with a multiple pregnancy)

specialist obstetricians

(obstetricians with a special interest, experience and knowledge of managing multiple pregnancy, and who work regularly with women with a multiple pregnancy)

tertiary level fetal medicine centre

(a specialist regional [or supra-regional] fetal medicine centre that has a multidisciplinary team with the expertise and infrastructure to assess and manage complicated twin and triplet pregnancies; this includes providing complex fetal interventions or therapies, for example, fetoscopic laser ablation for feto-fetal transfusion syndrome; and selective termination of pregnancy using techniques such as fetoscopic cord occlusion or radiofrequency ablation)

NSC

National Screening Committee

FASP

Fetal Anomaly Screening Programme

EFW

estimated fetal weight

DVP

deepest vertical pocket

MCA-PSV

middle cerebral artery peak systolic velocity

TRAP

twin reverse arterial perfusion sequence

TAPS

twin anaemia polycythaemia sequence

zygosity

(pregnancies are either monozygous [arising from one fertilised egg] or dizygous [arising from two separate fertilised eggs]: monozygous twins are identical; dizygous twins are non-identical)

Sources

Twin and triplet pregnancy (2019) NICE guideline NG137

Your responsibility

Guidelines

The recommendations in this guideline represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, professionals and practitioners are expected to take this guideline fully into account, alongside the individual needs, preferences and values of their patients or the people using their service. It is not

mandatory to apply the recommendations, and the guideline does not override the responsibility to make decisions appropriate to the circumstances of the individual, in consultation with them and their families and carers or guardian.

Local commissioners and providers of healthcare have a responsibility to enable the guideline to be applied when individual professionals and people using services wish to use it. They should do so in the context of local and national priorities for funding and developing services, and in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities. Nothing in this guideline should be interpreted in a way that would be inconsistent with complying with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Technology appraisals

The recommendations in this interactive flowchart represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, health professionals are expected to take these recommendations fully into account, alongside the individual needs, preferences and values of their patients. The application of the recommendations in this interactive flowchart is at the discretion of health professionals and their individual patients and do not override the responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or their carer or guardian.

Commissioners and/or providers have a responsibility to provide the funding required to enable the recommendations to be applied when individual health professionals and their patients wish to use it, in accordance with the NHS Constitution. They should do so in light of their duties to have due regard to the need to eliminate unlawful discrimination, to advance equality of opportunity and to reduce health inequalities.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Medical technologies guidance, diagnostics guidance and interventional procedures guidance

The recommendations in this interactive flowchart represent the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, healthcare professionals are expected to take these recommendations fully into account. However, the interactive flowchart does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

Commissioners and/or providers have a responsibility to implement the recommendations, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity, and foster good relations. Nothing in this interactive flowchart should be interpreted in a way that would be inconsistent with compliance with those duties.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.